

must be inspected to ensure its acceptability.

(c) Repair of a crack, or of any defect in a previously repaired area must be in accordance with written weld repair procedures that have been qualified under § 195.214. Repair procedures must provide that the minimum mechanical properties specified for the welding procedure used to make the original weld are met upon completion of the final weld repair.

[Amdt. 195-29, 48 FR 48674, Oct. 20, 1983]

**§ 195.234 Welds: Nondestructive testing.**

(a) A weld may be nondestructively tested by any process that will clearly indicate any defects that may affect the integrity of the weld.

(b) Any nondestructive testing of welds must be performed—

(1) In accordance with a written set of procedures for nondestructive testing; and

(2) With personnel that have been trained in the established procedures and in the use of the equipment employed in the testing.

(c) Procedures for the proper interpretation of each weld inspection must be established to ensure the acceptability of the weld under § 195.228.

(d) During construction, at least 10 percent of the girth welds made by each welder during each welding day must be nondestructively tested over the entire circumference of the weld.

(e) All girth welds installed each day in the following locations must be nondestructively tested over their entire circumference, except that when nondestructive testing is impracticable for a girth weld, it need not be tested if the number of girth welds for which testing is impracticable does not exceed 10 percent of the girth welds installed that day:

(1) At any onshore location where a loss of hazardous liquid could reasonably be expected to pollute any stream, river, lake, reservoir, or other body of water, and any offshore area;

(2) Within railroad or public road rights-of-way;

(3) At overhead road crossings and within tunnels;

(4) Within the limits of any incorporated subdivision of a State government; and

(5) Within populated areas, including, but not limited to, residential subdivisions, shopping centers, schools, designated commercial areas, industrial facilities, public institutions, and places of public assembly.

(f) When installing used pipe, 100 percent of the old girth welds must be nondestructively tested.

(g) At pipeline tie-ins, including tie-ins of replacement sections, 100 percent of the girth welds must be nondestructively tested.

[Amdt. 195-22, 46 FR 38360, July 27, 1981, as amended by Amdt. 195-35, 50 FR 37192, Sept. 21, 1985; Amdt. 195-52, 59 FR 33397, June 28, 1994]

**§ 195.236 External corrosion protection.**

Each component in the pipeline system must be provided with protection against external corrosion.

**§ 195.238 External coating.**

(a) No pipeline system component may be buried or submerged unless that component has an external protective coating that—

(1) Is designed to mitigate corrosion of the buried or submerged component;

(2) Has sufficient adhesion to the metal surface to prevent underfilm migration of moisture;

(3) Is sufficiently ductile to resist cracking;

(4) Has enough strength to resist damage due to handling and soil stress; and

(5) Supports any supplemental cathodic protection.

In addition, if an insulating-type coating is used it must have low moisture absorption and provide high electrical resistance.

(b) All pipe coating must be inspected just prior to lowering the pipe into the ditch or submerging the pipe, and any damage discovered must be repaired.

**§ 195.242 Cathodic protection system.**

(a) A cathodic protection system must be installed for all buried or submerged facilities to mitigate corrosion that might result in structural failure. A test procedure must be developed to

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determine whether adequate cathodic protection has been achieved.

(b) A cathodic protection system must be installed not later than 1 year after completing the construction.

(c) For the bottoms of aboveground breakout tanks with greater than 500 barrels (79.5 m<sup>3</sup>) capacity built to API Specification 12F, API Standard 620, or API Standard 650 (or its predecessor Standard 12C), the installation of a cathodic protection system under paragraph (a) of this section after October 2, 2000, must be in accordance with API Recommended Practice 651, unless the operator notes in the procedural manual (§195.402(c)) why compliance with all or certain provisions of API Recommended Practice 651 is not necessary for the safety of a particular breakout tank.

(d) For the internal bottom of aboveground breakout tanks built to API Specification 12F, API Standard 620, or API Standard 650 (or its predecessor Standard 12C), the installation of a tank bottom lining after October 2, 2000, must be in accordance with API Recommended Practice 652, unless the operator notes in the procedural manual (§195.402(c)) why compliance with all or certain provisions of API Recommended Practice 652 is not necessary for the safety of a particular breakout tank.

[Amdt. 195-22, 46 FR 38360, July 27, 1981, as amended by Amdt. 195-66, 64 FR 15935, Apr. 2, 1999]

### § 195.244 Test leads.

(a) Except for offshore pipelines, electrical test leads used for corrosion control or electrolysis testing must be installed at intervals frequent enough to obtain electrical measurements indicating the adequacy of the cathodic protection.

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(b) Test leads must be installed as follows:

(1) Enough looping or slack must be provided to prevent test leads from being unduly stressed or broken during backfilling.

(2) Each lead must be attached to the pipe so as to prevent stress concentration on the pipe.

(3) Each lead installed in a conduit must be suitably insulated from the conduit.

### § 195.246 Installation of pipe in a ditch.

(a) All pipe installed in a ditch must be installed in a manner that minimizes the introduction of secondary stresses and the possibility of damage to the pipe.

(b) Except for pipe in the Gulf of Mexico and its inlets, all offshore pipe in water at least 3.7 m (12 ft) deep but not more than 61 m (200 ft) deep, as measured from the mean low tide, must be installed so that the top of the pipe is below the natural bottom unless the pipe is supported by stanchions, held in place by anchors or heavy concrete coating, or protected by an equivalent means.

[Amdt. 195-22, 46 FR 38360, July 27, 1981, as amended by Amdt. 195-52, 59 FR 33397, June 28, 1994; 59 FR 36256, July 15, 1994]

### § 195.248 Cover over buried pipeline.

(a) Unless specifically exempted in this subpart, all pipe must be buried so that it is below the level of cultivation. Except as provided in paragraph (b) of this section, the pipe must be installed so that the cover between the top of the pipe and the ground level, road bed, river bottom, or sea bottom, as applicable, complies with the following table:

Location	Cover inches (millimeters)	
	For normal excavation	For rock excavation <sup>1</sup>
Industrial, commercial, and residential areas .....	36 (914)	30 (762)
Crossings of inland bodies of water with a width of at least 100 ft (30 mm) from high water mark to high water mark .....	48 (1219)	18 (457)
Drainage ditches at public roads and railroads .....	36 (914)	36 (914)
Deepwater port safety zone .....	48 (1219)	24 (610)
Gulf of Mexico and its inlets and other offshore areas under water less than 12 ft (3.7 m) deep as measured from the mean low tide .....	36 (914)	18 (457)